

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 15 (Cancelled).

16. (New) Apparatus for detecting a predefined fill level of a medium in a container by means of a conductive measuring system, the container including a lid, including:

at least two measuring electrodes extending into the container, wherein a measurement current flowing between said two measuring electrodes is used for detecting when the predefined fill level is reached; and

a compensation electrode, which is so arranged and connected that a disturbance current flowing between one of said measuring said electrodes and said compensation electrode due to conductive accretions on the lid of the container is drained away via said compensation electrode.

17. (New) The apparatus for detecting a predefined fill level of a medium in a container by means of a conductive measuring system, the container including a lid, including:

at least two measuring electrodes extending into the container, wherein a measurement current flowing between said two measuring electrodes is used for detecting when the predefined fill level is reached; and

a compensation electrode, which is so arranged and/or connected that, on the basis of a disturbance current flowing between one of said measuring electrodes and said compensation electrode due to conductive accretions on the lid of the container, the degree of fouling in the region of the lid of the container is determined.

18. (New) The apparatus as claimed in claim 16, wherein:
said two measuring electrodes are secured to the lid of the container.
19. (New) The apparatus as claimed in claim 18, wherein:
said two measuring electrodes are cylindrical or columnar.
20. (New) The apparatus as claimed in claim 16, wherein:
said compensation electrode is constructed and arranged such that it is not contacted by the medium upon the reaching of the predefined fill level.
21. (New) The apparatus as claimed in claim 20, wherein:
said compensation electrode is plate-shaped and arranged on the lid of the container.
22. (New) The apparatus as claimed in claim 16, wherein:
said compensation electrode is arranged symmetrically between said two measuring electrodes.
23. (New) The apparatus as claimed in claim 16, further including:
a first current measuring unit, which provides information concerning the reaching of the predefined fill level on the basis of the measurement current flowing between said two measuring electrodes.
24. (New) The apparatus as claimed in claim 23, further including:
a first evaluating unit, which, on the basis of the measurement current registered by said first current measuring unit, detects and, if necessary, signals when the predefined fill level has been reached.
25. (New) The apparatus as claimed in claim 16, further including:
a second current measuring unit, which, on the basis of the disturbance current

flowing between one of said two measuring electrodes and said compensation electrode, makes information available concerning the degree of fouling on the lid of the container.

26. (New) The apparatus as claimed in claim 25, further including:

a second evaluating unit, which, on the basis of the disturbance current determined in said second current measuring unit, detects and, if necessary, signals that a predetermined degree of fouling has been reached or which degree of fouling has been reached.

27. (New) The apparatus as claimed in claim 26, further including:

a memory unit associated with said second evaluating unit, in which characteristic curves and/or data are stored, which give the degree of fouling on the lid of the container as a function of the disturbance current flowing between one of said two measuring electrodes and said compensation electrode.

28. (New) The apparatus as claimed in claim 26, further including:

a flow control, wherein:

said second evaluating unit or said flow control sets an alarm signal, as soon as the degree of fouling on the lid of the container exceeds a predetermined, tolerable degree of fouling.

29. (New) The apparatus as claimed in claim 16, wherein:

the container is a metering container for a sampler.

30. (New) The apparatus as claimed in claim 16, wherein:

said compensation electrode is constructed such that it has a projection, which comes into contact with the sample medium at a predefined, second fill level; and

said final evaluating unit, in the case of a non-conductive sample medium, interprets a current change in said measuring unit as a malfunction of the conductive

measuring system.

31. (New) The apparatus as claimed in claim 17, wherein:
said two measuring electrodes are secured to the lid of the container.

32 (New) The apparatus as claimed in claim 18, wherein:
said two measuring electrodes are cylindrical or columnar.

33. (New) The apparatus as claimed in claim 17, wherein:
said compensation electrode is constructed and arranged such that it is not
contacted by the medium upon the reaching of the predefined fill level.

34. (New) The apparatus as claimed in claim 33, wherein:
said compensation electrode is plate-shaped and arranged on the lid of the
container.

35. (New) The apparatus as claimed in claim 17, wherein:
said compensation electrode is arranged symmetrically between said two
measuring electrodes.

36. (New) The apparatus as claimed in claim 17, further including:
a first current measuring unit, which provides information concerning the
reaching of the predefined fill level on the basis of the measurement current flowing
between said two measuring electrodes.

37. (New) The apparatus as claimed in claim 36, further including:
a first evaluating unit, which, on the basis of the measurement current registered
by said first current measuring unit, detects and, if necessary, signals when the
predefined fill level has been reached.

38. (New) The apparatus as claimed in claim 17, further including:

a second current measuring unit, which, on the basis of the disturbance current flowing between one of said two measuring electrodes and said compensation electrode, makes information available concerning the degree of fouling on the lid of the container.

39. (New) The apparatus as claimed in claim 38, further including:

a second evaluating unit, which, on the basis of the disturbance current determined in said second current measuring unit, detects and, if necessary, signals that a predetermined degree of fouling has been reached or which degree of fouling has been reached.

40. (New) The apparatus as claimed in claim 39, further including:

a memory unit associated with said second evaluating unit, in which characteristic curves and/or data are stored, which give the degree of fouling on the lid of the container as a function of the disturbance current flowing between one of said two measuring electrodes and said compensation electrode.

41. (New) The apparatus as claimed in claim 39, further including:

a flow control, wherein:

said second evaluating unit or said flow control sets an alarm signal, as soon as the degree of fouling on the lid of the container exceeds a predetermined, tolerable degree of fouling.

42. (New) The apparatus as claimed in claim 17, wherein:

the container is a metering container for a sampler.

43. (New) The apparatus as claimed in claim 17, wherein:

said compensation electrode is constructed such that it has a projection, which comes into contact with the sample medium at a predefined, second fill level; and

U.S. Pat. Appl. 10/509,334

said final evaluating unit, in the case of a non-conductive sample medium, interprets a current change in said measuring unit as a malfunction of the conductive measuring system.